

ABSTRACT OF THE DISCLOSURE

An object of the present invention is to realize exertion of p-type conduction without incurring deterioration of crystal in the light-emitting layer or generating contamination, production at a low cost and good ohmic contact with  
5 an electrode. The method for producing a p-type gallium nitride-based compound semiconductor of the present invention includes producing a gallium nitride-based compound semiconductor layer doped with a p-type impurity, producing a catalyst layer having a metal, alloy or compound on the gallium nitride-based compound semiconductor layer, and annealing the gallium nitride-based compound semiconductor layer fixed with the catalyst layer.  
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